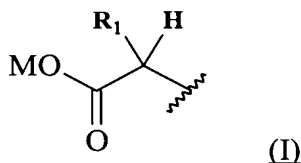


IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A homopolymer ~~Homopolymers~~ of acrylic acid and/or copolymer ~~copolymers~~ of acrylic acid with a hydrosoluble monomer ~~hydrosoluble monomers~~, wherein the homopolymer and/or copolymer ~~characterised in that they have~~ has a polymolecularity index of under 2.2 determined in aqueous media by a gel permeation chromatographic (GPC) method, having as a standard a series of 5 sodium polyacrylate standards supplied by Polymer Standard Service as references PAA 18K, PAA 8K, PAA 5K, PAA 4K and PAA 3K, and the homopolymer and/or copolymer comprises ~~contain~~ at ~~[[the]]~~ an end of the homopolymer and/or copolymer chain a pattern in accordance with the following formula (I):



~~[[-]]~~ where wherein

~~R₁ designates~~ is an alkyl radical having 1 to 10 carbon atoms ~~[[,]]~~ or an aromatic radical that is optionally ~~possibly~~ substituted by an alkyl chain having 1 to 4 carbon atoms; and

~~[[-]]~~ and where M is designates the a hydrogen atom, an amine salt, ammonium or an alkaline cation.

Claim 2 (Currently Amended): The homopolymer and/or copolymer of
~~Homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble monomers according to~~ claim 1, wherein M is an amine salt, and wherein the amine in the

amine salt is an ~~characterised in that the amines are chosen from among the~~ aliphatic and/or cyclic primary, secondary or tertiary amine ~~amines~~.

Claim 3 (Currently Amended): The homopolymer and/or copolymer of claim 1, wherein M is an alkaline cation, and wherein the alkaline cation is a cation of ~~Homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble monomers according to claim 1,~~ characterised in that the alkaline cations are selected from sodium, potassium ~~[[and]]~~ or lithium.

Claim 4 (Currently Amended): The homopolymer and/or copolymer of ~~Homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble monomers according to claim 1,~~ characterised in that wherein R₁ is an alkyl radical having from 2 to 6 carbon atoms, and M ~~is designates the~~ a hydrogen atom, or a sodium or potassium cation.

Claim 5 (Currently Amended): The homopolymer and/or copolymer of ~~Homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble monomers according to claim 4,~~ characterised in that wherein R₁ is an alkyl radical having 2 to 6 carbon atoms, and M ~~is designates the~~ a hydrogen atom or a sodium cation.

Claim 6 (Currently Amended): The homopolymer and/or copolymer of ~~Homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble monomers according to claim 5,~~ characterised in that wherein R₁ is an alkyl radical having from 2 to 4 carbon atoms, and M ~~designates the~~ hydrogen atom or sodium.

Claim 7 (Currently Amended): The homopolymer and/or copolymer of
~~Homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble~~
~~monomers according to claim 6, wherein characterised in that~~ R_1 is ~~[[the]]~~ an alkyl radical
having 4 carbon atoms, ~~and M designates the hydrogen atom or sodium.~~

Claim 8 (Currently Amended): The homopolymer and/or copolymer of
~~Homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble~~
~~monomers according to claim 7, wherein characterised in that~~ R_1 ~~is the~~ alkyl radical having 4
carbon atoms, ~~and M~~ is a ~~designates~~ sodium cation.

Claim 9 (Currently Amended): The homopolymer and/or copolymer of claim 1,
which is the copolymer of acrylic acid with a hydrosoluble monomer, wherein the
~~Copolymers of acrylic acid with hydrosoluble~~ monomer is selected from the group consisting
of monomers according to claim 1, characterised in that the hydrosoluble monomers are
~~chosen from among~~ methacrylic acid, itaconic acid, maleic acid, 2-acrylamido-2-methyl-1-
propane sulphonic acid in acid form, or partially neutralised, 2-methacrylamido-2-methyl-1-
propane sulphonic acid in acid form or partially neutralised, 3-methacrylamido-2-hydroxy-1-
propane sulphonic acid in acid form or partially neutralised, allylsulphonic acid,
methallylsulphonic acid, allyloxybenzene sulphonic acid, methallyloxybenzene sulphonic
acid, 2-hydroxy-3-(2-propenyloxy)propane sulphonic acid, 2-methyl-2-propene-1-sulphonic
acid, ethylene sulphonic acid, propene sulphonic acid, styrene sulphonic acid, and all their
salts, vinyl sulphonic acid, sodium methallylsulfonate, sulfopropyl acrylate or methacrylate,
sulfomethylacrylamide, sulfomethylmethacrylamide, ~~or from among~~ acrylamide,

methylacrylamide, n-methylolacrylamide, n-acryloylmorpholine, ethylene glycol methacrylate, ethylene glycol acrylate, propylene glycol methacrylate, propylene glycol acrylate, methoxy polyethylene glycol acrylate, methoxy polyethylene glycol methacrylate, propene phosphonic acid, phosphate of acrylate or methacrylate, [[of]] ethylene or propylene glycol, ~~or from among~~ vinylpyrrolidone, methacrylamido propyl trimethyl ammonium chloride or sulphate, methacrylate of trimethyl ammonium ethyl chloride or sulphate [[,]] as well as their counterparts in acrylate and in acrylamide [[,]] whether or not quaternised, ~~and/or~~ ammonium dimethyldiallylchloride, salts thereof and mixtures thereof.

Claim 10 (Currently Amended): The homopolymer and/or copolymer of
~~Homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble monomers according to claim 1, characterised in that they~~ wherein the homopolymer and/or copolymer have has an average molecular mass by weight (Mw) of between 1000 g/mole and 100,000 g/mole, ~~and preferentially between 1000 g/mole and 50,000 g/mole, and very preferentially between 1000 g/mole and 30,000 g/mole, and in an extremely preferential manner between 1000 g/mole and 20,000 g/mole,~~ determined in aqueous media by a gel permeation chromatographic (GPC) method having as a standard a series of 5 standards of sodium polyacrylate supplied by Polymer Standard Service as references PAA 18K, PAA 8K, PAA 5K, PAA 4K and PAA 3K.

Claim 11 (Currently Amended): ~~Homopolymers~~ The homopolymer and/or copolymer
~~of acrylic acid and/or copolymers of acrylic acid with hydrosoluble monomers according to claim 1, characterised in that they~~ wherein the homopolymer and/or copolymer has have a conversion rate of over 90%, determined by high performance liquid chromatography (HPLC), in which [[the]] constituent components of [[the]] a mixture are separated by a

stationary phase, and detected by a UV detector; after calibration of the detector, and an ~~[[the]]~~ area of ~~[[the]]~~ a peak corresponding to the acrylic acid ~~compound~~ enables ~~[[the]]~~ quantity of residual acrylic acid to be obtained.

Claim 12 (Currently Amended): The homopolymer and/or copolymer of
~~Homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble~~
~~monomers according to claim 1, wherein the homopolymer and/or copolymer characterised in~~
~~that they are either~~ is ~~in their~~ acid form, is non-neutralised, or is partially or totally
neutralized ~~neutralised~~ by ~~one or more~~ at least one monovalent, divalent, ~~[[or]]~~ trivalent, or
greater than trivalent neutralization agent ~~agents, or neutralisation agents with higher~~
~~valencies, or mixtures thereof.~~

Claim 13 (Currently Amended): The homopolymer and/or copolymer of
~~Homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble~~
~~monomers according to claim 12, wherein the homopolymer and/or copolymer is partially or~~
totally neutralized by ~~characterised in that~~ the monovalent neutralization agent which is a
compound comprising an alkaline cation, and/or an ~~agents are chosen from the group~~
~~constituted by the compounds containing alkaline cations, or from the aliphatic and/or cyclic~~
primary or secondary amine ~~amines.~~

Claim 14 (Currently Amended): The homopolymer and/or copolymer of claim 12,
wherein the homopolymer and/or copolymer is partially or totally neutralized by
~~Homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble~~
~~monomers according to claim 12, characterised in that~~ the divalent, ~~[[or]]~~ trivalent, or greater
than trivalent neutralisation agents, ~~or neutralisation agents with higher valency, that are~~

~~chosen~~ selected from ~~the group constituted by the~~ compounds comprising ~~containing~~ divalent cations belonging to the alkaline earths and also by the trivalent cations, or by compounds ~~containing~~ comprising cations with a higher valency.

Claim 15 (Withdrawn): The method of using as agents to aid grinding and/or co-grinding of mineral matter, of homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble monomers, according to claim 1.

Claim 16 (Withdrawn): The method of using as agents to aid grinding and/or co-grinding of mineral matter, of homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble monomers according to claim 15, characterised in that the mineral matter is chosen from natural or synthetic calcium carbonate, the dolomites, kaolin, talc, gypsum, titanium oxide, satin white or aluminium trihydroxide, mica and mixtures of at least two fillers, selected from talc-calcium carbonate mixtures, calcium carbonate-kaolin mixtures or mixtures of calcium carbonate with aluminium trihydroxide, or mixtures with synthetic or natural fibres or mineral co-structures.

Claim 17 (Withdrawn): The method of using as agents to aid grinding and/or co-grinding of mineral matter, of homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble monomers according to claim 16, characterised in that the mineral matter is a calcium carbonate selected from marble, calcite, chalk, or mixtures thereof.

Claim 18 (Withdrawn): The method of using as agents to aid grinding and/or co-grinding of mineral matter, of homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble monomers according to claim 15, characterised in that 0.05% to 5%

by dry weight of the polymers according to the invention is used, relative to the dry weight of mineral matter.

Claim 19 (Withdrawn): The method of using as agents to aid grinding and/or co-grinding of mineral matter, of homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble monomers according to claim 18, characterised in that 0.1% to 3% by dry weight of the polymers according to the invention is used, relative to the dry weight of mineral matter.

Claim 20 (Withdrawn): The method of using as dispersing agents of mineral matter, of homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble monomers, according to claim 1.

Claim 21 (Withdrawn): The method of using as dispersing agents of mineral matter, of homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble monomers according to claim 20, characterised in that the mineral matter is selected from among natural or synthetic calcium carbonate, the dolomites, kaolin, talc, gypsum, satin white or again aluminium trihydroxide, mica and mixtures of at least two of these fillers selected from talc-calcium carbonate mixtures, calcium carbonate-kaolin mixtures or mixtures of calcium carbonate with aluminium trihydroxide, or mixtures with synthetic or natural fibres or mineral co-structures.

Claim 22 (Withdrawn): The method of using as dispersing agents of mineral matter, of homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble

monomers according to claim 21, characterised in that the mineral matter is a calcium carbonate selected from marble, calcite, chalk, or mixtures thereof.

Claim 23 (Withdrawn): The method of using as dispersing agents of mineral matter, of homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble monomers according to claim 20, characterised in that 0.05% to 5% by dry weight of the polymers according to the invention is used, relative to the dry weight of mineral matter.

Claim 24 (Withdrawn): The method of using as dispersing agents of mineral matter, of homopolymers of acrylic acid and/or copolymers of acrylic acid with hydrosoluble monomers according to claim 23, characterised in that 0.1% to 3% by dry weight of the polymers according to the invention is used, relative to the dry weight of mineral matter.

Claim 25 (Withdrawn): Aqueous suspensions of mineral matter, ground and/or co-ground through the use as grinding and/or co-grinding aid agents of the polymers according to claim 15, characterised in that the mineral matter is selected from natural or synthetic calcium carbonate, the dolomites, kaolin, talc, gypsum, titanium oxide, satin white or aluminium trihydroxide, mica and mixtures of at least two of these fillers, selected from talc-calcium carbonate mixtures, calcium carbonate-kaolin mixtures or mixtures of calcium carbonate with aluminium trihydroxide, or mixtures with synthetic or natural fibres or mineral co-structures.

Claim 26 (Withdrawn): Aqueous suspensions of mineral matter ground and/or co-ground through the use as a grinding aid and/or co-grinding aid agent of the polymers according to claim 25, characterised in that the mineral matter is a calcium carbonate selected from marble, calcite, chalk, or mixtures thereof.

Claim 27 (Withdrawn): Aqueous suspensions of mineral matter ground and/or co-ground through the use as a grinding aid and/or co-grinding aid agent of the polymers according to claim 25, characterised in that 0.05% to 5% by dry weight of the polymers is used, relative to the dry weight of the mineral matter.

Claim 28 (Withdrawn): Aqueous suspensions of mineral matter ground and/or co-ground through the use as a grinding aid and/or co-grinding aid agent of the polymers according to claim 27, characterised in that 0.1% to 3% by dry weight of the polymers according to the invention is used, relative to the dry weight of the mineral matter.

Claim 29 (Withdrawn): Aqueous dispersions of mineral matter obtained through the use of the polymers as a dispersant agent according to claim 20, characterised in that the mineral matter is selected from natural or synthetic calcium carbonate, the dolomites, kaolin, talc, gypsum, satin white or aluminium trihydroxide, mica and mixtures of at least two of fillers, selected talc-calcium carbonate mixtures, calcium carbonate-kaolin mixtures or mixtures of calcium carbonate with aluminium trihydroxide, or mixtures with synthetic or natural fibres or mineral co-structures.

Claim 30 (Withdrawn): Aqueous dispersions of mineral matter obtained through the use of the polymers as a dispersant agent according to claim 29, characterised in that the mineral matter is a calcium carbonate selected from marble, calcite, chalk or mixtures thereof.

Claim 31 (Withdrawn): Aqueous dispersions of mineral matter obtained through the use of the polymers as a dispersant agent according to claim 29, characterised in that 0.05% to 5% by dry weight of the polymers is used, relative to the dry weight of mineral matter.

Claim 32 (Withdrawn): Aqueous dispersions of mineral matter obtained through the use of the polymers as a dispersant agent according to claim 31, characterised in that 0.1% to 3% by dry weight of the polymers according to the invention is used, relative to the dry weight of mineral matter.

Claim 33 (Withdrawn): The method of using an aqueous suspensions and dispersions of mineral matter according to claim 25, in paper formulations.

Claim 34 (Withdrawn): The method of using the aqueous suspensions and dispersions of mineral matter according to claim 25, in paint formulations.

Claim 35 (Withdrawn): The method of using the aqueous suspensions and dispersions of mineral matter according to claim 25, in plastic formulations.

Claim 36 (Withdrawn): The method of using the aqueous suspensions and dispersions of mineral matter according to claim 25, in cement formulations.

Claim 37 (Withdrawn): The method of using the aqueous suspensions and dispersions of mineral matter according to claim 25, in ceramic formulations.

Claim 38 (Withdrawn): The method of using the aqueous suspensions and dispersions of mineral matter according to claim 25, in detergent formulations.

Claim 39 (Withdrawn): The method of using the aqueous suspensions and dispersions of mineral matter according to claim 25, in formulations for the treatment of water.

Claim 40 (Withdrawn): The method of using the aqueous suspensions and dispersions of mineral matter according to claim 25, in drilling muds.

Claim 41 (Withdrawn): The method of using the aqueous suspensions and dispersions of mineral matter according to claim 25, in cosmetic formulations.

Claim 42 (Withdrawn): The method of using as a dispersant agent of homopolymers of acrylic acid and/or copolymers of acrylic acid with other hydrosoluble monomers according to claim 1, in paper formulations.

Claim 43 (Withdrawn): The method of using as a dispersant agent of homopolymers of acrylic acid and/or copolymers of acrylic acid with other hydrosoluble monomers according to claim 1, in paint formulations.

Claim 44 (Withdrawn): The method of using as a dispersant agent of homopolymers of acrylic acid and/or copolymers of acrylic acid with other hydrosoluble monomers according to claim 1, in cement formulations.

Claim 45 (Withdrawn): The method of using as a dispersant agent of homopolymers of acrylic acid and/or copolymers of acrylic acid with other hydrosoluble monomers according to claim 1, in ceramic formulations.

Claim 46 (Withdrawn): The method of using as a dispersant agent of homopolymers of acrylic acid and/or copolymers of acrylic acid with other hydrosoluble monomers according to claim 1, in formulations for the treatment of water.

Claim 47 (Withdrawn): The method of using as a dispersant agent of homopolymers of acrylic acid and/or copolymers of acrylic acid with other hydrosoluble monomers according to claim 1, in detergent formulations.

Claim 48 (Withdrawn): The method of using as a dispersant agent of homopolymers of acrylic acid and/or copolymers of acrylic acid with other hydrosoluble monomers according to claim 1, in drilling muds.

Claim 49 (Withdrawn): The method of using as a dispersant agent of homopolymers of acrylic acid and/or copolymers of acrylic acid with other hydrosoluble monomers according to claim 1, in cosmetic formulations.

Claim 50 (Withdrawn): The method of using as a scale inhibitor agent of homopolymers of acrylic acid and/or copolymers of acrylic acid with other water-soluble monomers according to claim 25, in formulations for the treatment of water.

Claim 51 (Withdrawn): Paper formulations containing homopolymers of acrylic acid and/or copolymers of acrylic acid with other hydrosoluble monomers according to claim 1.

Claim 52 (Withdrawn): Paint formulations, containing homopolymers of acrylic acid and/or copolymers of acrylic acid with other hydrosoluble monomers, according to claim 1.

Claim 53 (Withdrawn): Plastic formulations, containing homopolymers of acrylic acid and/or copolymers of acrylic acid with other hydrosoluble monomers, according to claim 1.

Claim 54 (Withdrawn): Cement formulations, containing homopolymers of acrylic acid and/or copolymers of acrylic acid with other hydrosoluble monomers, according to claim 1.

Claim 55 (Withdrawn): Ceramic formulations, containing homopolymers of acrylic acid and/or copolymers of acrylic acid with other hydrosoluble monomers, according to claim 1.

Claim 56 (Withdrawn): Formulations for the treatment of water, containing homopolymers of acrylic acid and/or copolymers of acrylic acid with other hydrosoluble monomers, according to claim 1.

Claim 57 (Withdrawn): Detergent formulations, containing homopolymers of acrylic acid and/or copolymers of acrylic acid with other hydrosoluble monomers, according to claim 1.

Claim 58 (Withdrawn): Drilling muds, containing homopolymers of acrylic acid and/or copolymers of acrylic acid with other hydrosoluble monomers, according to claim 1.

Claim 59 (Withdrawn): Cosmetic formulations, containing homopolymers of acrylic acid and/or copolymers of acrylic acid with other hydrosoluble monomers, according to claim 1.

Claim 60 (New): The homopolymer and/or copolymer of claim 1, wherein the homopolymer and/or copolymer has an average molecular mass by weight (M_w) of between 1000 g/mole and 50,000 g/mole, determined in aqueous media by a gel permeation chromatographic (GPC) method having as a standard a series of 5 standards of sodium polyacrylate supplied by Polymer Standard Service as references PAA 18K, PAA 8K, PAA 5K, PAA 4K and PAA 3K.

Claim 61 (New): The homopolymer and/or copolymer of claim 1, wherein the homopolymer and/or copolymer has an average molecular mass by weight (M_w) of between 1000 g/mole and 30,000 g/mole, determined in aqueous media by a gel permeation

chromatographic (GPC) method having as a standard a series of 5 standards of sodium polyacrylate supplied by Polymer Standard Service as references PAA 18K, PAA 8K, PAA 5K, PAA 4K and PAA 3K.

Claim 62 (New): The homopolymer and/or copolymer of claim 1, wherein the homopolymer and/or copolymer has an average molecular mass by weight (M_w) of between 1000 g/mole and 20,000 g/mole, determined in aqueous media by a gel permeation chromatographic (GPC) method having as a standard a series of 5 standards of sodium polyacrylate supplied by Polymer Standard Service as references PAA 18K, PAA 8K, PAA 5K, PAA 4K and PAA 3K.